UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,199	06/22/2005	Dieter Huhse	3286-101	2124

6449 7590 07/16/2008

ROTHWELL, FIGG, ERNST & MANBECK, P.C.
1425 K STREET, N.W.
SUITE 800
WASHINGTON, DC 20005

EXAMINER	
CARTER, MICHAEL W	

ART UNIT	PAPER NUMBER
2828	

NOTIFICATION DATE	DELIVERY MODE
07/16/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No.	Applicant(s)	
	10/529,199	HUHSE ET AL.	
	Examiner	Art Unit	
	MICHAEL CARTER	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 10-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *Koichi translation*.

DETAILED ACTION

Remarks

1. **Claims 8-9** are cancelled.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. **Claims 1-2, 11-12, and 18-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi et al. JP Publication 58115947 (hereinafter referred to as Koichi) in view of Heffner et al. US Patent 6,265,237 (hereinafter referred to as Heffner).

4. **For claim 1**, Koichi teaches a method for generating an optical laser pulse (Po), in which a main laser ("2nd semiconductor laser", label 6) is driven with an electrical control signal (through 1, 2, and "2nd driving circuit" 7), and the optical laser pulse is generated by means of the main laser (label 6), an optical injection pulse (I) of an auxiliary laser ("1st semiconductor laser", label 4) being fed into the main laser, and the optical injection pulse (I) being generated in such a way that it arrives in the main laser at a point in time at which, on account of the control signal, the charge carrier density in the main laser has just reached or just exceeds the threshold charge carrier density ("the exciting signal of the laser 6 is synchronized with the injected optical signal") (Abstract). Further, Koichi teaches the main laser is multimode and the auxiliary laser is single mode when not injected by the single mode laser (page 5 of translation).

Koichi does not explicitly teach the main laser is a Fabry-Perot laser or that the auxiliary laser is a DFB or a DBR laser.

However these lasers are well known in the art. See Heffner which teaches a Fabry-Perot laser is a multimode laser while a DFB laser is a single mode laser (column 1, lines 20-32). The particular laser used in Koichi does not appear critical to the operation of the device, rather it is the single and multimode nature of the lasers which is critical. Therefore it would have been obvious to one skilled in the art to substitute the known lasers of Heffner into the system of Koichi at the time the invention was made by an obvious engineering design choice.

5. **For claims 11 and 19,** Koichi teaches a device for generating an optical laser pulse having a main laser (label 6), which is driven with an electrical control signal (through 1, 2, and "2nd driving circuit" 7) and generates the optical laser pulse, and an auxiliary laser (label 4), which is optically connected to the main laser and feeds an optical injection pulse into the main laser (label 5, "optical coupling circuit), an electrical auxiliary control signal (through 1, 2, and "1st drive circuit" 3) being applied to the auxiliary laser (label 4) in such a way that its optical injection pulse arrives in the main laser at a point in time at which the charge carrier density of the main laser has just reached or just exceeds the threshold charge carrier density ("the exciting signal of the laser 6 is synchronized with the injected optical signal") (abstract). Further, Koichi teaches the main laser is multimode and the auxiliary laser is single mode when not injected by the single mode laser (page 5 of translation).

Koichi does not explicitly teach the main laser is a Fabry-Perot laser or that the auxiliary laser is a DFB or a DBR laser.

However these lasers are well known in the art. See Heffner which teaches a Fabry-Perot laser is a multimode laser while a DFB laser is a single mode laser (column 1, lines 20-32). The particular laser used in Koichi does not appear critical to the operation of the device, rather it is the single and multimode nature of the lasers which is critical. Therefore it would have been obvious to one skilled in the art to substitute the known lasers of Heffner into the system of Koichi at the time the invention was made by an obvious engineering design choice.

6. **For claim 2, 12, and 18** Koichi is further applied according to the previous office action.

7. **Claims 3-4, 6, 13-14, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi in view of Heffner and further in view of Mourou US Patent 4,347,437 (hereinafter referred to as Mourou).

8. **For claims 3-4, 6, 13-14, and 16** the prior art is further applied according to the arguments of the previous office action.

9. **Claims 5 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi in view of Heffner and Mourou and further in view of Basting et al. US Patent 6,005,880 (hereinafter referred to as Basting).

10. **For claims 5 and 15** the prior art is further applied according to the arguments of the previous office action.

11. **Claims 7 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi in view of Heffner and further in view of Braiman et al. US PG Pub 2003/0103534 (hereinafter referred to as Braiman).

12. **For claims 7 and 17** the prior art is further applied according to the arguments of the previous office action.

13. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi, in view of Heffner and further in view of Hakimi et al. US PG Pub 2002/0015206 (hereinafter referred to as Hakimi).

Response to Arguments

14. Applicant's arguments with respect to independent claims 1 and 11 and their dependent claims have been considered but are moot in view of the new grounds of rejection necessitated by amendment.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Carter whose telephone number is (571) 270-

1872. The examiner can normally be reached on Monday-Friday, 7:00 a.m.-4:30 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MC/

/Minsun Harvey/
Supervisory Patent Examiner, Art Unit 2828